

ABSTRACT OF DISCLOSURE

A hand-supportable Digital Imaging-Based Bar Code Symbol Reading Device comprises: an IR-based Object Presence and Range Detection Subsystem; a Multi-Mode Area-type Image Formation and Detection Subsystem having narrow-area and wide area image capture modes of operation; a Multi-Mode LED-based Illumination Subsystem having narrow-area and wide area illumination modes of operation; an Automatic Light Exposure Measurement and Illumination Control Subsystem; an Image Capturing and Buffering Subsystem; a Multi-Mode Image-Processing Bar Code Symbol Reading Subsystem; an Input/Output Subsystem; a manually-activatable trigger switch; a System Mode Configuration Parameter Table; and a System Control Subsystem integrated with each of the above-described subsystems. The bar code reading device can be configured and operated in numerous programmable modes of system operation to automatically read 1D and 2D bar code symbologies in a high-speed manner using advanced modes of image processing on captured images.